

A Project Report
on
HOSTEL BOOKING WEBAPPLICATION

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requirement for the award of the degree of*

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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled "**HOSTEL BOOKING WEBAPPLICATION**" in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of JULY-2021 to DECEMBER-2021, under the supervision of **Dr. Vishwadeepak Singh Baghela, Professor, Department of Computer Science and Engineering** of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor

(Dr. Vishwadeepak Singh Baghela
Professor)

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of 18SCSE1010624
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ABSTRACT

As the name specifies “HOSTEL BOOKING WEBAPPLICATION” is a software developed for managing various activities in the hostel. For the past few years the number of educational institutions are increasing rapidly. Thereby the number of hostels are also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software’s are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually.

Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system Which is more user friendly and more GUI oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system.

- Less human error
- Strength and strain of manual labour can be reduced
- High security
- Data redundancy can be avoided to some extent
- Data consistency
- Easy to handle
- Easy data updating
- Easy record keeping
- Backup data can be easily generated

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CHAPTER-1

Introduction

1.1 Problem definition

We have got nine hostels in our university, which consist of four boy's hostel and five girl's hostel. All these hostels at present are managed manually by the hostel office. The Registration form verification to the different data processing are done manually.

Thus there are a lot of repetitions which can be easily avoided. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually

Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system.

1.2 User Panel

1.2.1 User Login

1.2.1.1 Home

1. This consist of the different pop-up menus showing the details of the different hostels
2. It contain a link to the CUSAT official web-site.

3. It allows the different users to access the registration forms.

4. He can view the Student administration division of the different hostels and also view the notice boards.

1.2.1.2 Registration Form

This section provides an online form to the students which can be filled by them, and a copy of the filled page can be taken in the printed form. This is later submitted to the Hostel authorities which can be verified by them before allotting them to the respective hostels.

1.2.1.3 Notice Board

All the 9 hostels have their Notice boards. Any change in the Hostel fee, mess fee will be shown in this. It can be also used for different notifications.

1.3 Admin Panel

1.3.1 Administrator Login

1.3.2.1 Home

The Administrator can :

1. Allot different students to the different hostels.
2. Vacate the students for the hostels.
3. Control the status of the fee payment.

4. Edit the details of the students & modify the student records.

1.3.2.1.1 Allotment of the hostels

There will be pre-defined criteria for the admission to the hostels. He checks the attested application forms of the students obtained from the internet and verifies it with the student database. If the students are found eligible then they are allotted to the hostel.

1.3.2.1.2 Vacating the rooms

As the student's course is over they will vacate their rooms. So it is required for the administrator to remove their records from the database tables. This section includes the option for the room vacation and the deletion of the particular record from the database.

CHAPTER-2

SYSTEM ENVIRONMENT

2.1 Hardware Configuration

1. Pentium IV Processor
2. 512 MB RAM
3. 40GB HDD
4. 1024 * 768 Resolution Color Monitor

Note: This is not the “System Requirements”.

2.2 Software Configuration

1. OS : Windows XP
2. PHP Triad (PHP, MySQL, Apache, and PHPMyAdmin)

2.3 Software Features

2.3.1 PHP TRIAD

PHPTriad installs a complete working PHP/MySQL server environment on Windows platforms (9x/ NT). Installs PHP, MySQL, Apache, and PHPMyAdmin.

2.3.1.1 PHP

PHP is a scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical applications. While PHP was originally created by Rasmus Lerdorf in 1995, the main

implementation of PHP is now produced by **The PHP Group** and serves as the *de facto* standard for PHP as there is no formal specification. PHP is free software released under the PHP License, however it is incompatible with the GNU General Public License (GPL), due to restrictions on the usage of the term *PHP*. It is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP is installed on more than 20 million websites and 1 million web servers.

PHP originally stood for Personal Home Page. It began in 1994 as a set of Common Gateway Interface binaries written in the C programming language by the Danish/Greenlandic programmer Rasmus Lerdorf. Lerdorf initially created these Personal Home Page Tools to replace a small set of Perl scripts he had been using to maintain his personal homepage. The tools were used to perform tasks such as displaying his résumé and recording how much traffic his page was receiving. He combined these binaries with his Form Interpreter to create PHP/FI, which had more functionality. PHP/FI included a larger implementation for the C programming language and could communicate with databases, enabling the building of simple, dynamic web applications.

Lerdorf released PHP publicly on June 8, 1995 to accelerate bug location and improve the code. This release was named PHP version 2 and already had the basic functionality that PHP has today. This included Perl-like variables, form handling, and the ability to embed HTML. The syntax was similar to Perl but was more limited, simpler, and less consistent. Zeev Suraski and Andi Gutmans, two Israeli developers at the Technion IIT, rewrote the parser in 1997 and formed the base of PHP 3, changing the language's name to the recursive initialism *PHP: Hypertext Preprocessor*. The development team officially released PHP/FI 2 in November 1997 after months of beta testing. Afterwards, public testing of PHP 3 began, and the official launch came in June 1998. Suraski and Gutmans then started a new rewrite of

PHP's core, producing the Zend Engine in 1999. They also founded Zend Technologies in Ramat Gan, Israel.

On May 22, 2000, PHP 4, powered by the Zend Engine 1.0, was released. On July 13, 2004, PHP 5 was released, powered by the new Zend Engine II. PHP 5 included new features such as improved support for object-oriented programming, the PHP Data Objects extension (which defines a lightweight and consistent interface for accessing databases), and numerous performance enhancements. The most recent update released by The PHP Group is for the older PHP version 4 code branch.

In 2008, PHP 5 became the only stable version under development. Late static binding has been missing from PHP and will be added in version 5.3. PHP 6 is under development alongside PHP 5. Major changes include the removal of `register_globals`, magic quotes, and safe mode. The reason for the removals was because `register_globals` had given way to security holes, and magic quotes had an unpredictable nature, and was best avoided. Instead, to escape characters, Magic quotes may be substituted with the `addslashes()` function, or more appropriately an escape mechanism specific to the database vendor itself like `mysql_real_escape_string()` for MySQL.

PHP does not have complete native support for Unicode or multibyte strings; Unicode support will be included in PHP 6. Many high profile open source projects ceased to support PHP 4 in new code as of February 5, 2008, due to the GoPHP5 initiative, provided by a consortium of PHP developers promoting the transition from PHP 4 to PHP 5. It runs in both 32-bit and 64-bit environments, but on Windows the only official distribution is 32-bit, requiring Windows 32-bit compatibility mode to be enabled while using IIS in a 64-bit Windows environment. There is a third-party distribution available for 64-bit Windows.

Usage

PHP is a general-purpose scripting language that is especially suited for web development. PHP generally runs on a web server, taking PHP code as its input and creating web pages as output. It can also be used for command-line scripting and client-side GUI applications. PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems. It is available free of charge, and the PHP Group provides the complete source code for users to build, customize and extend for their own use.

PHP primarily acts as a filter, taking input from a file or stream containing text and/or PHP instructions and outputs another stream of data; most commonly the output will be HTML. It can automatically detect the language of the user. From PHP 4, the PHP parser compiles input to produce bytecode for processing by the Zend Engine, giving improved performance over its interpreter predecessor. Originally designed to create dynamic web pages, PHP's principal focus is server-side scripting, and it is similar to other server-side scripting languages that provide dynamic content from a web server to a client, such as Microsoft's Active Server Pages, Sun Microsystems' JavaServer Pages, and `mod_perl`. PHP has also attracted the development of many frameworks that provide building blocks and a design structure to promote rapid application development (RAD). Some of these include CakePHP, Symfony, CodeIgniter, and Zend Framework, offering features similar to other web application frameworks.

The LAMP architecture has become popular in the web industry as a way of deploying web applications. PHP is commonly used as the *P* in this bundle alongside Linux, Apache and MySQL, although the *P* may also refer to Python or Perl.

As of April 2007, over 20 million Internet domains were hosted on servers with PHP installed, and PHP was recorded as the most popular Apache module. Significant websites are written in PHP including the userfacing portion of Facebook, Wikipedia (MediaWiki), Yahoo!, MyYearbook, , Digg, Wordpress and Tagged. In addition to server-side scripting, PHP can be used to create stand-alone, compiled applications and libraries, it can be used for shell scripting, and the PHP binaries can be called from the command line.

2.3.1.2 Speed optimization

As with many scripting languages, PHP scripts are normally kept as human-readable source code, even on production web servers. In this case, PHP scripts will be compiled at runtime by the PHP engine, which increases their execution time. PHP scripts are able to be compiled before runtime using PHP compilers as with other programming languages such as C (the language PHP and its extensions are written in). Code optimizers aim to reduce the computational complexity of the compiled code by reducing its size and making other changes that can reduce the execution time with the overall goal of improving performance. The nature of the PHP compiler is such that there are often opportunities for code optimization, and an example of a code optimizer is the Zend Optimizer PHP extension.

2.3.1.3 Security

The National Vulnerability Database stores all vulnerabilities found in computer software. The overall proportion of PHP-related vulnerabilities on the database amounted to: 12% in 2003, 20% in 2004, 28% in 2005, 43% in 2006, 36% in 2007, and 35% in 2008. Most of these PHP-related vulnerabilities can be exploited remotely: they allow hackers to steal or destroy data from data sources linked to the webserver (such as an SQL database), send spam or

contribute to DOS attacks using malware, which itself can be installed on the vulnerable servers.

Hosting PHP applications on a server requires a careful and constant attention to deal with the security risks. There are advanced protection patches such as Suhosin and Hardening-Patch, especially designed for web hosting environments. Installing PHP as a CGI binary rather than as an Apache module is the preferred method for added security. With respect to securing the code itself, PHP code can be obfuscated to make it difficult to read while remaining functional.

2.3.1.4 Syntax

```
<html>
<head>
    <title>PHP Test </title>
</head>
<body>
    <?php echo "<p> Hello World </p>"; ?>
</body></html>
```

Note : - Code in bold letters shows the PHP code embedded within HTML

2.3.1.5 Data types

PHP stores whole numbers in a platform-dependent range. This range is typically that of 32-bit signed integers. Unsigned integers are converted to signed values in certain situations; this behavior is different from other programming languages. Integer variables can be assigned using decimal (positive and negative), octal, and hexadecimal notations. Floating point numbers are also stored in a platform-specific range. They can be specified using floating point notation, or two forms of scientific notation. PHP has a native Boolean type that is similar to

the native Boolean types in Java and C++. Using the Boolean type conversion rules, non-zero values are interpreted as true and zero as false, as in Perl and C++. The null data type represents a variable that has no value.

The only value in the null data type is *NULL*. Variables of the “resource” type represent references to resources from external sources. These are typically created by functions from a particular extension, and can only be processed by functions from the same extension; examples include file, image, and database resources. Arrays can contain elements of any type that PHP can handle, including resources, objects, and even other arrays. Order is preserved in lists of values and in hashes with both keys and values, and the two can be intermingled. PHP also supports strings, which can be used with single quotes, double quotes, or heredoc syntax. The Standard PHP Library (SPL) attempts to solve standard problems and implements efficient data access interfaces and classes.

2.3.1.6 Functions

PHP has hundreds of base functions and thousands more from extensions. These functions are well documented on the PHP site, but unfortunately, the built-in library has a wide variety of naming conventions and inconsistencies. PHP currently has no functions for thread programming.

Version 5.2 and earlier

Functions are not first-class functions and can only be referenced by their name—directly or dynamically by a variable containing the name of the function. User-defined functions can be created at any time without being prototyped. Functions can be defined inside code blocks, permitting a run-time decision as to whether or not a function should be defined. Function calls must use parentheses, with the exception of zero argument class constructor functions called with the PHP new operator, where parentheses are optional. PHP supports quasi-anonymous

functions through the `create_function()` function, although they are not true anonymous functions because anonymous functions are nameless, but functions can only be referenced by name, or indirectly through a variable `$function_name()`; in PHP.

Version 5.3 and newer

PHP gained support for first-class functions and closures. True anonymous functions are supported function `getAdder($x)` using the following syntax :

```
{
    function getAdder($x)
        { return function ($y) use ($x)
            { return $x + $y;
              };
          }
    $adder = getAdder(8); echo
    $adder(2); // prints "10"
```

Here, `getAdder()` function creates a closure using parameter `$x` (keyword “use” forces getting variable from context), which takes additional argument `$y` and returns it to the caller. Such a function can be stored, given as the parameter to another functions, etc. For more details see Lambda functions and closures RFC.

2.3.1.7 Objects

Basic object-oriented programming functionality was added in PHP 3. Object handling was completely rewritten for PHP 5, expanding the feature set and enhancing performance. In previous versions of PHP, objects were handled like primitive types. The drawback of this method was that the whole object was copied when a variable was assigned or passed as a parameter to a method. In the new approach, objects are referenced by handle, and not by value. PHP 5 introduced private and protected member variables and methods, along with

abstract classes and final classes as well as abstract methods and final methods. It also introduced a standard way of declaring constructors and destructors, similar to that of other object-oriented languages such as C++, and a standard exception handling model.

Furthermore, PHP 5 added interfaces and allowed for multiple interfaces to be implemented. There are special interfaces that allow objects to interact with the runtime system. Objects implementing `ArrayAccess` can be used with array syntax and objects implementing `Iterator` or `IteratorAggregate` can be used with the `foreach` language construct. There is no virtual table feature in the engine, so static variables are bound with a name instead of a reference at compile time.

If the developer creates a copy of an object using the reserved word *clone*, the Zend engine will check if a `__clone()` method has been defined or not. If not, it will call a default `__clone()` which will copy the object's properties. If a `__clone()` method is defined, then it will be responsible for setting the necessary properties in the created object. For convenience, the engine will supply a function that imports the properties of the source object, so that the programmer can start with a by-value replica of the source object and only override properties that need to be changed.

2.3.1.8 Resources

PHP includes free and open source libraries with the core build. PHP is a fundamentally Internet-aware system with modules built in for accessing FTP servers, many database servers, embedded SQL libraries such as embedded PostgreSQL, MySQL and SQLite, LDAP servers, and others. Many functions familiar to C programmers such as those in the `stdio` family are available in the standard PHP build. PHP has traditionally used features such as `"magic_quotes_gpc"` and `"magic_quotes_runtime"` which attempt to escape apostrophes (') and quotes (") in strings in the assumption that they will be used in databases, to prevent SQL injection attacks. This leads to confusion over which data is escaped and which

is not, and to problems when data is not in fact used as input to a database and when the escaping used is not completely correct. To make code portable between servers which do and do not use magic quotes, developers can preface their code with a script to reverse the effect of magic quotes when it is applied.

PHP allows developers to write extensions in C to add functionality to the PHP language.

These can then be compiled into PHP or loaded dynamically at runtime. Extensions have been written to add support for the Windows API, process management on Unix-like operating systems, multibyte strings (Unicode), cURL, and several popular compression formats. Some more unusual features include integration with Internet Relay Chat, dynamic generation of images and Adobe Flash content, and even speech synthesis. The PHP Extension Community Library (PECL) project is a repository for extensions to the PHP language. Zend provides a certification exam for programmers to become certified PHP developers.

2.4 MY SQL

What is a database? Quite simply, it's an organized collection of data. A database management system (DBMS) such as Access, FileMaker Pro, Oracle or SQL Server provides you with the software tools you need to organize that data in a flexible manner. It includes facilities to add, modify or delete data from the database, ask questions (or queries) about the data stored in the database and produce reports summarizing selected contents.

MySQL is a multithreaded, multi-user SQL database management system (DBMS). The basic program runs as a server providing multi-user access to a number of databases. Originally financed in a similar fashion to the JBoss model, MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQLAB now a subsidiary of Sun Microsystems, which holds the copyright to most of the codebase. The project's source code is available under terms of the GNU General Public Licence, as well as under a variety of proprietary agreements.

MySQL is a database. The data in MySQL is stored in database objects called tables. A table is a collection of related data entries and it consists of columns and rows. Databases are useful when storing information categorically. A company may have a database with the following tables: "Employees", "Products", "Customers" and "Orders".

2.4.1 Database Tables

A database most often contains one or more tables. Each table is identified by a name (e.g. "Customers" or "Orders"). Tables contain records (rows) with data.

2.4.2 Queries

A query is a question or a request. With MySQL, we can query a database for specific information and have a recordset returned.

2.4.3 Create a connection to a database

Before you can access data in a database, you must create a connection to the database. In PHP, this is done with the `mysql_connect()` function.

Syntax

```
mysql_connect (servername, username, password) ;
```

Parameter	Description
servername	Optional. Specifies the server to connect to. Default value is "localhost:3306"
username	Optional. Specifies the username to log in with. Default value is the name of the user that owns the server process
password	Optional. Specifies the password to log in with. Default is ""

2.4.4 Closing a Connection

The connection will be closed automatically when the script ends. To close the connection before, use

the `mysql_close()` function:

```
<?php
$con = mysql_connect("localhost","peter","abc123");
if (!$con)
{
    die('Could not connect: ' . mysql_error());
}
// some code
mysql_close($con);
?>
```

2.4.5 Create a Database

The `CREATE DATABASE` statement is used to create a database in MySQL.

Syntax

```
CREATE DATABASE database_name
```

To get PHP to execute the statement above we must use the `mysql_query()` function. This function is used to send a query or command to a MySQL connection.

2.4.6 Create a Table

The `CREATE TABLE` statement is used to create a table in MySQL

Syntax

```
CREATE TABLE table_name
(
    column_name1 data_type,
    column_name2 data_type,
    column_name3 data_type,
    ....
)
```

2.4.7 phpMAdmin

phpMyAdmin is an open source tool written in PHP intended to handle the administration of MySQL over the World Wide Web. phpMyAdmin supports a wide range of operations with MySQL. Currently it can create and drop databases, create/drop/alter tables, delete/edit/add fields, execute any SQL statement, manage users and permissions, and manage keys on fields. While you still have the ability to directly execute any SQL statement. phpMyAdmin can manage a whole MySQL server (needs a super-user) as well as a single database. To accomplish the latter you'll need a properly set up MySQL user who can read/write only the desired database. It's up to you to look up the appropriate part in the MySQL manual.

phpMyAdmin can:

- browse and drop databases, tables, views, fields and indexes
- create, copy, drop, rename and alter databases, tables, fields and indexes
- maintenance server, databases and tables, with proposals on server configuration
- execute, edit and bookmark any SQL-statement, even batch-queries
- load text files into tables
- create and read dumps of tables
- export data to various formats: CSV, XML, PDF, ISO/IEC 26300 - OpenDocument Text a Spreadsheet, Word, Excel and L^AT_EX formats
- administer multiple servers
- manage MySQL users and privileges
- check referential integrity in MyISAM tables

· using Query-by-example (QBE), create complex queries automatically connecting required tables

· create PDF graphics of your Database layout

· search globally in a database or a subset of it

· transform stored data into any format using a set of predefined functions, like

displaying BLOB data as image or download-link

· support InnoDB tables and foreign keys

· support mysqli, the improved MySQL extension

A word about users:

Many people have difficulty understanding the concept of user management with regards to phpMyAdmin. When a user logs in to phpMyAdmin, that username and password are passed directly to MySQL. phpMyAdmin does no account management on its own (other than allowing one to manipulate the MySQL user account information); all users must be valid MySQL users.

1) phpMyAdmin can compress (Zip, GZip -RFC 1952- or Bzip2 formats) dumps and CSV exports if you use PHP with Zlib support (—with-zlib) and/or Bzip2 support (—with-bz2). Proper support may also need changes in php.ini. a phpMyAdmin screen appears as shown below.

2.4.8 Requirements

- o *PHP*
- o You need PHP 5.2.0 or newer, with session support and the Standard PHP Library (SPL) extension.
- o To support uploading of ZIP files, you need the PHP zip extension.
- o For proper support of multibyte strings (eg. UTF-8, which is currently default), you should install mbstring and ctype extensions.
- o You need GD2 support in PHP to display inline thumbnails of JPEGs (“image/jpeg: inline”) with their original aspect ratio
- o When using the “cookie” authentication method, the mcrypt extension is strongly suggested for most users and is required for 64-bit machines. Not using mcrypt will cause phpMyAdmin to load pages significantly slower.

2.4.9 Apache Web server

Often referred to as simply *Apache*, a public-domain open source Web server developed by a looselyknit group of programmers. The first version of Apache, based on the NCSA httpd Web server, was developed in 1995.

Core development of the Apache Web server is performed by a group of about 20 volunteer programmers, called the *Apache Group*. However, because the source code is freely available, anyone can adapt the server for specific needs, and there is a large public library of Apache add-ons. In many respects, development of Apache is similar to development of the Linux operating system.

The original version of Apache was written for UNIX, but there are now versions that run under OS/2, Windows and other platforms. The name is a tribute to the Native American Apache Indian tribe, a tribe well known for its endurance and skill in warfare. A common misunderstanding is that it was called Apache because it was developed from existing NCSA code plus various patches, hence the name *a patchy server*, or Apache server.

Apache consistently rates as the world's most popular Web server according to analyst surveys. Apache has attracted so much interest because it is full-featured, reliable, and free. Originally developed for UNIX™ operating systems, Apache has been updated to run on Windows, OS/2, and other platforms. One aspect of Apache that some site administrators find confusing — especially those unfamiliar with UNIX-style software — is its configuration scheme. Instead of using a point-and-click graphic user interface (GUI) or Windows Registry keys as most other modern software packages, Apache generally relies on simple text files for its configuration settings.

Configuration Files

Apache uses a system of three text files for managing its configuration data. All three of these files (almost always) appear in Apache's `./conf` directory and are designed to be edited by system administrators:

1. `httpd.conf` for general settings
2. `srm.conf` for resource settings
3. `access.conf` for security settings

When Apache first starts, these files are processed in the order shown above. Originally, the initial installation of Apache included default entries within each of the three files. In the most recent versions of Apache, however, the default installation has changed. Now `httpd.conf` is treated as the “master” configuration file and it contains all of the settings. Both `srm.conf`

and access.conf still exist in the installation, but they contain no settings and are empty except for some comments.

Inside Httpd.conf

Traditionally httpd.conf contained general settings such as the ServerName and Port number. These entries appear as follows in the file: ServerName compnetworking.about.com Port 80 The term “httpd” stands for *HTTP Daemon*. Recall that in a UNIX environment, the term *daemon* refers to a type of process designed to launch at system boot and continue running for very long periods of time. This file contains a number of other entries (technically called directives), but for most of these, modifications are optional. Probably the most useful of these entries is ServerAdmin.

Access and Security Settings

It is recommended practice now for Apache administrators to manage their resource and security settings from httpd.conf. Administrators of older versions of Apache can simply cut their entries from srm.conf and access.conf and paste them into the master file. If an administrator wants to go one step further and delete the two empty files, they should also place the following entries in httpd.conf to prevent Apache from attempting to access them.

CHAPTER - 3

SYSTEM ANALYSIS

3.1 Existing System

For the past few years the number of educational institutions are increasing rapidly. Thereby the number of hostels are also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually

Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented. We can improve the efficiency of the system, thus overcome the following drawbacks of the existing system.

- more human error.
- more strength and strain of manual labour needed
- Repetition of the same procedures.
- low security
- Data redundancy
- difficult to handle
- difficult to update data
- record keeping is difficult
- Backup data can be easily generated

CHAPTER - 4

SYSTEM DESIGN

4.1 Input Design

The system design is divided in to two portions. The Administrator section and the User(student's) section.

4.1.1 Administrator

1. The Administrator can allot different students to the different hostels.
- 2.He can vacate the students for the hostels.
- 3.He can control the status of the fee payment.
- 4.He can edit the details of the students.He can change their rooms, edit and delete the student records.

A process of converting user originated inputs to a computer-based format. Input design is an important part of development process since inaccurate input data are the most common cause of errors in data processing. Erroneous entries can be controlled by input design. It consists of developing specifications and procedures for entering data into a system and must be in simple format. The goal of input data design is to make data entry as easy, logical and free from errors as possible. In input data design, we design the source document that capture the data and then select the media used to enter them into the computer.

There are two major approaches for entering data in to the computer. They are

- Menus.
- Dialog Boxes.

Menus

A menu is a selection list that simplifies computer data access or entry. Instead of remembering what to enter, the user chooses from a list of options. A menu limits a user choice of response but reduce the chances for error in data entry.

Dialog Box

Dialog boxes are windows and these windows are mainly popup, which appear in response to certain conditions that occur when a program is run. It allows the display of bitmaps and pictures. It can have various controls like buttons, text boxes, list boxes and combo boxes. Using these controls we can make a 'dialog' with the program.

The proposed system has three major inputs. They are Machine Registration, Machine Scheduling and Request Form.


4.2 Process Design

Process design plays an important role in project development. In order to understand the working procedure, process design is necessary. Data Flow Diagram and System Flow chart are the tools used for process design.

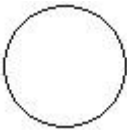
System Flow Chart is a graphical representation of the system showing the overall flow of control in processing at the job level; specifies what activities must be done to convert from a physical to logical model.


Data Flow Diagram is the logical representation of the data flow of the project. The DFD is drawn using various symbols. It has a source and a destination. The process is represented using circles and source and destination are represented using squares. The data flow is represented using arrows.

SYMBOLS USED IN DATA FLOW DIAGRAM

4.2.1  - source rectangle, which defines or destination

4.2.2  -Arrow, which shows dataflow.

4.2.3-  Circle, which represent a process that transforms incoming data into outgoing flow.

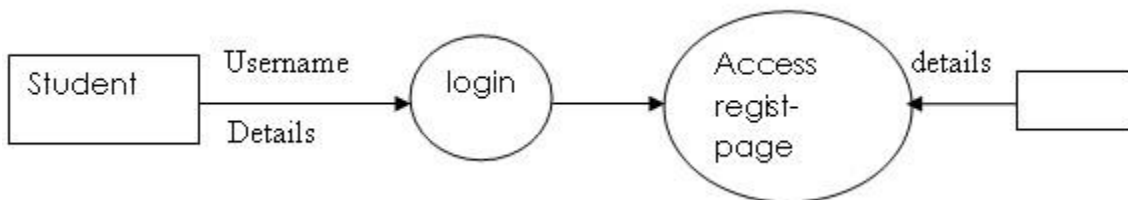
4.2.4  -Open rectangle, which shows a data store.

4.2.1 Data Flow Diagram

4.1 Context level DFD



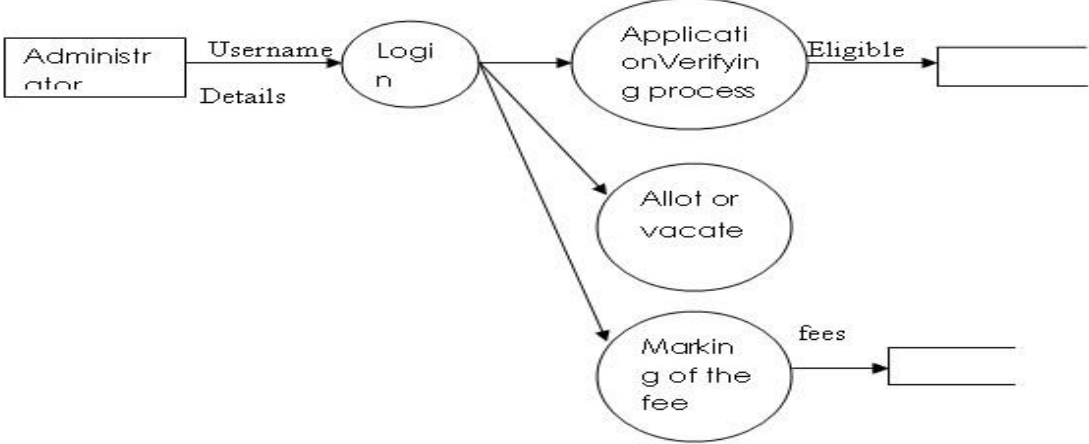
4.2 Student Module



4.3 Registration process



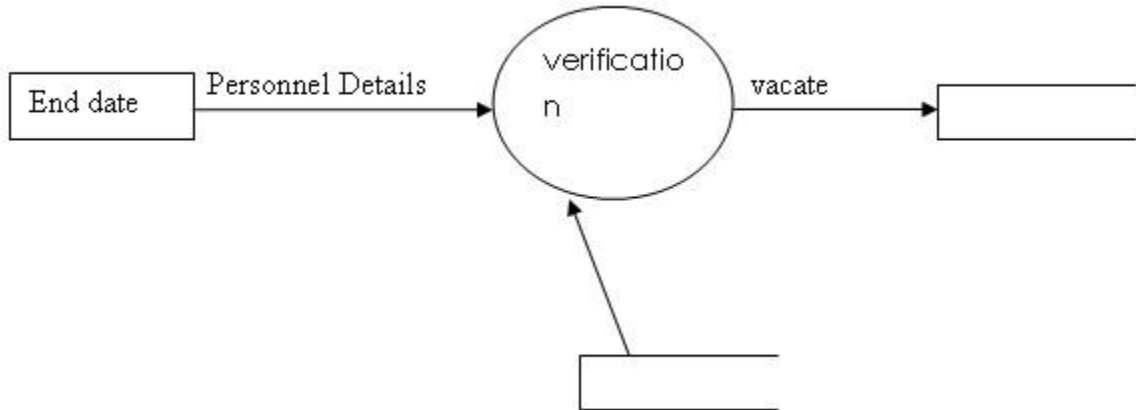
4.4 Admin module



4.5 Allotment process



4.6 Vacating process



4.3 Database Design

The data in the system has to be stored and retrieved from database. Designing the database is part of system design. Data elements and data structures to be stored have been identified at analysis stage.

They are structured and put together to design the data storage and retrieval system.

A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. The general objective is to make database access easy, quick, inexpensive and flexible for the user. Relationships are established between the data items and unnecessary data items are removed. Normalization is done to get an internal consistency of data and to have minimum redundancy and maximum stability. This ensures minimizing data storage required, minimizing chances of data inconsistencies and optimizing for updates. The MS Access database has been chosen for developing the relevant databases.

The following are the tables that are involved in the proposed system

1. Student account creation

Field Name	Data Type	Description
Name	Varchar	Name of the student
Branch	Varchar	Branch of the student
Userid	Int	Userid of the student
Password	Varchar	Password to use
Retype password	Varchar	Repeating it

2. Administrator Login

Field Name	Data Type	Description
Username	Int	Username of the student
Pass	Varchar	Password of the student

3. Application form

Field Name	Data Type	Description
Index no	Int	A unique no given to student
Name	Varchar	Name of the student.
Age	Int	Age of the student
dd_birth	Date	Date of birth of the student
Sex	Varchar	Sex of the student
Reservation	Varchar	Reservation if any
Dept	Varchar	department

Course	Varchar	Course of study
Semester	Int	Semester of study
Course_nature	Varchar	Type of course
Date_admit	Date	Date of course admission
Date_end	Date	End of course
Date_host_admit	Date	Date of hostel admission
Local Address	Longtext	Address of student
Permanent Address	Longtext	Address of guardian
Distance	Int	Distance from home

4. Allotment

Field Name	Data Type	Description
Room no.	Int	A unique no given to student
Name	Varchar	Name of the student.
Index no.	Int	Age of the student
Date_admission	Date	Date of birth of the student
Sex	Varchar	Sex of the student
Reservation	Varchar	Caste of the student

5. Vacating and editing

Field Name	Data Type	Description
Room no.	Int	A unique no given to student
Name	Varchar	Name of the student.
Index no.	int	Age of the student
Date_admission	date	Date of birth of the student
Sex	Varchar	Sex of the student
Reservation	Varchar	Caste of the student

6. Notice Board

Field Name	Data Type	Description
Title	varchar	The title of the notice
Contents	varchar	It includes the different notice descriptions.

4.4 Output Design

Designing computer output should proceed in an organized, well throughout manner; the right output element is designed so that people will find the system whether or executed. When we design an output we must identify the specific output that is needed to meet the system. The usefulness of the new system is evaluated on the basis of their output.

Once the output requirements are determined, the system designer can decide what to include in the system and how to structure it so that the require output can be produced. For the proposed software, it is necessary that the output reports be compatible in format with the existing reports. The output must be concerned to the overall performance and the system's working, as it should. It consists of developing specifications and procedures for data preparation, those steps necessary to put the inputs and the desired output, ie maximum user friendly. Proper messages and appropriate directions can control errors committed by users.

The output design is the key to the success of any system. Output is the key between the user and the sensor. The output must be concerned to the system's working, as it should.

Output design consists of displaying specifications and procedures as data presentation. User never left with the confusion as to what is happening without appropriate error and acknowledges message being received. Even an unknown person can operate the system without knowing anything about the system.

User Login

The screenshot shows the 'User Login' page of a 'Hostel Booking Web-Application'. On the left is a dark sidebar with a 'MAIN' menu containing 'User Registration', 'User Login', and 'Admin Login'. The main content area has a title 'User Login' and a form with the following elements:

- EMAIL:** A text input field containing the text 'User'.
- PASSWORD:** A password input field with masked characters '*****'.
- login:** A dark blue button with the text 'login'.
- Forgot password?:** A text link below the login button.

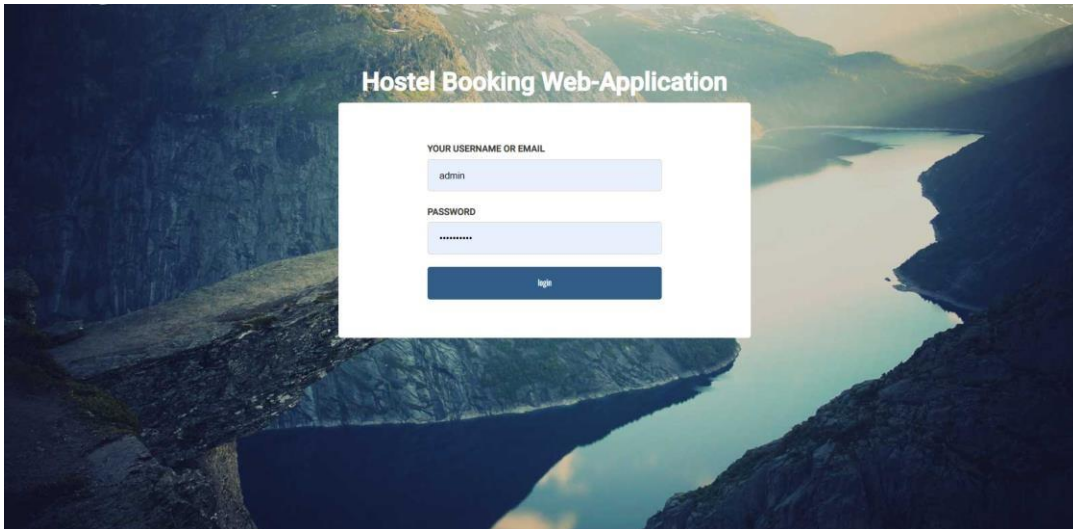
Student Registration

The screenshot shows the 'Student Registration' page of a 'Hostel Booking Web-Application'. On the left is a dark sidebar with a 'MAIN' menu containing 'User Registration', 'User Login', and 'Admin Login'. The main content area has a title 'Student Registration' and a form with a blue header 'FILL ALL INFO'. The form contains the following fields:

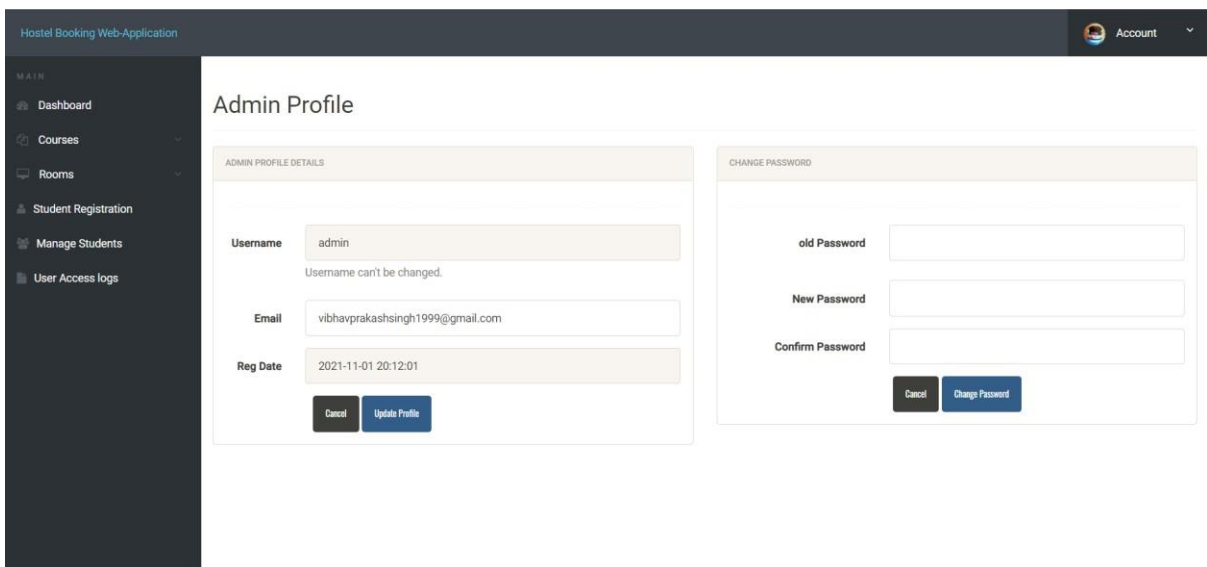
- Registration No.:** A text input field.
- First Name:** A text input field.
- Middle Name:** A text input field.
- Last Name:** A text input field.
- Gender:** A dropdown menu with the text 'Select Gender' and a downward arrow.
- Contact No.:** A text input field.
- Email id.:** A text input field.
- Password:** A text input field.
- Confirm Password:** A text input field.

At the bottom of the form are two buttons: 'Cancel' and 'Register'.

Admin Login



Admin Profile



Add Courses

The screenshot shows the 'Add Courses' page of a 'Hostel Booking Web-Application'. The page has a dark sidebar on the left with navigation options: Dashboard, Courses, Rooms, Student Registration, Manage Students, and User Access logs. The main content area is titled 'Add Courses' and contains a form with three input fields: 'Course Code', 'Course Name (Short)', and 'Course Name(Full)'. Below the fields is a blue 'Add course' button. The top right corner of the page shows the user's account information.

Hostel Booking Web-Application Account

MAIN

- Dashboard
- Courses
- Rooms
- Student Registration
- Manage Students
- User Access logs

Add Courses

ADD COURSES

Course Code

Course Name (Short)

Course Name(Full)

Add a Room

The screenshot shows the 'Add a Room' page of a 'Hostel Booking Web-Application'. The page has a dark sidebar on the left with navigation options: Dashboard, Courses, Rooms, Student Registration, Manage Students, and User Access logs. The main content area is titled 'Add a Room' and contains a form with three input fields: 'Select Seater' (a dropdown menu), 'Room No.', and 'Fee(Per Student)'. Below the fields is a blue 'Create Room' button. The top right corner of the page shows the user's account information.

Hostel Booking Web-Application Account

MAIN

- Dashboard
- Courses
- Rooms
- Student Registration
- Manage Students
- User Access logs

Add a Room

ADD A ROOM

Select Seater

Room No.

Fee(Per Student)

Registration

Hostel Booking Web-Application Account

MAIN

- Dashboard
- Courses
- Rooms
- Student Registration
- Manage Students
- User Access logs

Registration

FILL ALL INFO

Room Related info

Room no.

Seater

Fees Per Month

Food Status Without Food With Food(Rs 2000.00 Per Month Extra)

Stay From

Duration

Personal info

course

Manage Rooms

Hostel Booking Web-Application Account

MAIN

- Dashboard
- Courses
- Rooms
- Student Registration
- Manage Students
- User Access logs

Manage Rooms

ALL ROOM DETAILS

Show entries Search:

Sno.	Student Name	Reg no	Contact no	room no	Seater	Staying From	Action
1	VibhavPrakash	2147483647	9869698696	201	2	2021-12-01	edit delete
Sno.	Student Name	Reg no	Contact no	Room no	Seater	Staying From	Action

Showing 1 to 1 of 1 entries PREVIOUS 1 NEXT

Access Log

Hostel Booking Web-Application Account

Access Log

ALL COURSES DETAILS

Show 10 entries Search:

Sno.	User Id	User Email	IP	City	Country	Login Time
1	22	vibhavprakashsingh1999@gmail.com	:::1			2021-12-16 14:14:45
Sno.	User Id	User Email	IP	City	Country	Login Time

Showing 1 to 1 of 1 entries PREVIOUS 1 NEXT

CHAPTER - 5

IMPLEMENTATION

Implementation is the stage in the project where the theoretical design is turned into a working system and is giving confidence on the new system for the users that it will work efficiently and effectively. It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the change over, an evaluation of change over methods. Apart from planning major task of preparing the implementation are education and training of users. The implementation process begins with preparing a plan for the implementation of the system. According to this plan, the activities are to be carried out, discussions made regarding the equipment and resources and the additional equipment has to be acquired to implement the new system. In network backup system no additional resources are needed.

Implementation is the final and the most important phase. The most critical stage in achieving a successful new system is giving the users confidence that the new system will work and be effective. The system can be implemented only after thorough testing is done and if it is found to be working according to the specification. This method also offers the greatest security since the old system can take over if the errors are found or inability to handle certain type of transactions while using the new system.

5.1 User Training

After the system is implemented successfully, training of the user is one of the most important subtasks of the developer. For this purpose user manuals are prepared and handed over to the user to operate the developed system. Thus the users are trained to operate the developed system. Both the hardware and software securities are made to run the developed systems

successfully in future. In order to put new application system into use, the following activities were taken care of:

- Preparation of user and system documentation
- Conducting user training with demo and hands on
- Test run for some period to ensure smooth switching over the system

The users are trained to use the newly developed functions. User manuals describing the procedures for using the functions listed on menu are circulated to all the users. It is confirmed that the system is implemented up to users need and expectations.

5.2 Security and Maintenance

Maintenance involves the software industry captive, typing up system resources .It means restoring something to its original condition. Maintenance follows conversion to the extend that changes are necessary to maintain satisfactory operations relative to changes in the user's environment. Maintenance often includes minor enhancements or corrections to problems that surface in the system's operation. Maintenance is also done based on fixing the problems reported, changing the interface with other software or hardware enhancing the software.

Any system developed should be secured and protected against possible hazards. Security measures are provided to prevent unauthorized access of the database at various levels. An uninterrupted power supply should be so that the power failure or voltage fluctuations will not erase the data in the files.

Password protection and simple procedures to prevent the unauthorized access are provided to the users .The system allows the user to enter the system only through proper user name and password.

Benefits and and the scope of the Project

The proposed system for “HOSTEL BOOKING WEB-APPLICATION” is computerized. Today is the era of computers. This software project solves all the problems discussed above in the present system. The main objective of developing this project is to save time and money. The proposed system provides the following features on different tasks.

- All the details related to a hosteller could be find in one place like the admission details, fees details, room details , attendance ,mess details, stipend details etc.
- Will make the monitoring of student moment and stock details easy.
- The same application could be used by both the account section and the hostel management for their specific needs and purposes.

Limitation

Hostel Booking Web-Application is very user friendly application but its not portable Application.

Future Scope and Future Enhancement of the Project

It is easy to extend the system that we have proposed. A person could see any of the issued, unissued or all the rooms according to his/her will. In future we can implement some features for “HOSTEL BOOKING WEB-APPLICATION” project. In this system its possible to categorize room rent for middle class students and poor students. Some poor students are given a particular concession for the entire year.

Result

We have successfully implemented the Clothing Store. With the help of various links and tools, we have been able to provide a Desktop Application which is live and running on the System.

We have been successful in our attempt to take care of the needs of both the customers as well as the administrator.

CHAPTER - 6

CONCLUSION

To conclude the description about the project : The project, developed using PHP and MySQL is based on the requirement specification of the user and the analysis of the existing system, with flexibility for future enhancement.

The expanded functionality of today's software requires an appropriate approach towards software development. This hostel management software is designed for people who want to manage various activities in the hostel. For the past few years the number of educational institutions are increasing rapidly. Thereby the number of hostels are also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually.

Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented.

REFERENCE

The following books were referred during the analysis and execution phase of the project:

The Joy of PHP Programming: A Beginner's Guide – by Alan Forbes

Head First PHP & MySQL – by Lynn Begley & Michael Morrison

Learning PHP, Myself, JavaScript, and CSS: A Step-by-Step Guide to Creating Dynamic Websites – by Robin Nixon

PHP & Myself Web Development – by Luke Welling & Laura Thompson

PHP & Myself: The Missing Manual – by Brett McLaughlin

PHP: A Beginner's Guide – by Vicar Aswan

PHP Overview

- Overview of all things PHP

PHP IDE 1 - looks at what Eclipse and Zend have brewed together

PHP IDE 2- Dreamweaver CS4 beta adds LiveView and some other PHP features

PHP IDE 3 - Borland/CodeGear's Delphi for PHP has the most complete PHP IDE

PHP Meetup- new an example of the community support that makes PHP so popular

GUI Revolution- could PHP, JSP and all the rest be replaced by multi-touch RAIA ?

PHP Basics - the basic design of the PHP language, how it works in general

Php News - Events, calendar and news in the world of PHP

PHP Links - Links and references to other PHP tutorials sites and software vendors

PHP5 - the new PHP 5 adds a whole new OO re-engined design, SQLite, XML-processing, command line

PHP Arrays - tips about php array processing and functions

PHP Associative Arrays - all about associative arrays and functions which preserve associative keys

PHP Array Examples - examples of arrays used to fill Form drop down lists/select boxes

PHP Array Sorting - you have to careful with associative array, here are some safe sorting methods

PHP Content Management - PHP has a very rich set of free content management systems

PHP Colors - show how to display all the Web safe colors using nested loops and concatenation

PHP CLI -> PHP as Command Line Interpreter is a big benefit in PHP 5 => easier testing, adhoc utilities

PHP compared to JavaScript - compares syntax and architectures of PHP and JavaScript

PHP Logic & Bitwise Operations - PHP has a robust set of logic and bitwise operators

PHP Loop Syntax - PHP 5 adds to the foreach clause as we summarize flow & looping syntax

WEBSITES:

www.google.com

PHP.NET - the starting place for news, views, events, and links to all things

PHP Hotscripts - over 11,000 PHP scripts, most free, and very well classified and rated

PHPBuilder - the digested news and articles here mix well with scripts and tips.

<http://www.barmaje.com/topics/56>

https://en.wikipedia.org/wiki/Unified_Modeling_Language <https://creately.com/>

<https://www.smartsurvey.co.uk/>